

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-3 (Canceled).

4. (Previously Presented) In a gas turbine electric power generator wherein a rotational speed of the turbine is synchronized to the electrical frequency of a power grid, the turbine having a compressor component having one or more variable position stator vanes, an actuating mechanism for changing the angular position of the stator vanes and a controller for controlling the actuating mechanism, a method of implementing a compressor operational strategy for controlling the output power produced by the gas turbine, comprising:

controlling an angular position of the stator vanes in accordance with a predetermined nominal vane positioning schedule during ordinary base load power grid operational conditions;

during an onset of a power grid under-frequency condition, providing a gradual change in angular position of the stator vanes with respect to compressor physical speed from operating according to the predetermined nominal vane positioning schedule to operating according to a predetermined under-frequency vane positioning schedule; and

varying the angular position of the stator vanes in accordance with the predetermined under-frequency vane positioning schedule during the power grid under-frequency condition;

wherein the gradual change in angular position of the stator vanes during a transition in operation from the nominal vane positioning schedule to the predetermined under-frequency vane positioning schedule is substantially linear with respect to a change in turbine compressor speed.

5. (Previously Presented) A method of controlling the output power of a gas turbine as set forth in claim 4 further comprising the step of:

during a transition of power grid operational conditions from an under-frequency condition to ordinary base load operating conditions, providing a gradual change in angular position of the stator vanes with respect to compressor speed during a transition in operation from the predetermined under-frequency vane positioning schedule to the predetermined nominal vane positioning schedule.

6. (Previously Presented) A method of controlling the output power of a gas turbine as set forth in claim 5 wherein the gradual change in angular position of ganged inlet/stator vanes during a transition in operation from the predetermined under-frequency vane positioning schedule to the predetermined nominal vane positioning schedule is substantially linear with respect to a change in a compressor physical speed, N_{phys} .

7. (Previously Presented) A method of controlling the output power of a gas turbine as set forth in claim 4 wherein the angular position of the stator vanes is varied with respect to a compressor corrected speed, N_c , according to the following relationship:

$$N_c = \frac{N_{phys}}{\sqrt{\frac{T_{inlet}}{519}}}$$

where N_{phys} is the compressor physical speed and T_{inlet} = compressor inlet air temperature.

Claims 8-10 (Canceled).